Managing your plant and equipment

Plant and equipment (commonly called 'plant') includes any machinery, equipment, appliance, implement or tool, and any component, fitting or accessory used in, or in conjunction with them. In Queensland state schools and department workplaces 'plant' is used by all employees. For example:

- non-portable or fixed machinery in workshops, air-conditioners and lifts, ovens, fume hoods
- portable power tools and equipment, including 240V and cordless (battery) types; e.g. electric beater, drill
- electrical appliances e.g. photocopiers, computers and science laboratory equipment
- hand tools e.g. hammer, chisel, knives.

Plant, depending on its type and use, can pose a risk to the health and safety of staff and/or students. Hazards include:

- moving or rotating parts and pulleys with risk of entanglement, cutting, amputation, scalping
- ejected materials causing lacerations, puncture wounds or eye injuries
- pinch and squash points causing bruising and crush injuries
- lifting or handling items or materials causing musculoskeletal injuries
- non-mechanical hazards such as emissions or fumes, dust, noise and electrocution.

There are specific health and safety requirements for the safe use of plant in legislation including the WHS Regulation 2011, Part 5. Schools (and other department workplaces) need to manage a variety of plant. A lifecycle approach (from pre-purchase to disposal) provides a process to help meet legislative requirements (see Figure 1).

The selection and combination of controls for hazards associated with plant will be dependent on the level of risk. For example, you put different measures in place to manage scissors when compared to managing a table saw in a practical workshop.

Figure 1: Lifecycle for managing plant & equipment

What do we do to manage plant safely?

1. ***Purchase the right equipment***: choose the right equipment for task/situation;
    - ensure an appropriate design with guarding and safety features;
    - consider ongoing maintenance; robustness/suitability for continuous use,
    - the time it will take to complete jobs; ergonomic/ease of use etc.
    - Prior to purchasing, and as a condition of acceptance, ensure all plant complies with relevant Australian Standards and that appropriate information will be provided with the item, such as operating and maintenance instructions.
    - Equipment is purchased in accordance with the appropriate purchasing requirements and supply arrangements if available.
    - All machinery is correctly installed and tested prior to operation.
    - Machines are supplied with the required safety devices including guarding.
    - Plant/workshop has available relevant waste/dust/fume extraction equipment.

2. ***Establish safe procedures:*** develop and implement processes for safe work such as safe operating procedures (SOPs), maintenance records, risk assessments for items of equipment and the activity.

3. ***Determine who can use equipment*** (students/staff); provide general rules and housekeeping practices; communicate and share information to relevant people.

   - All operational risks associated with any plant and equipment have been identified, assessed and controlled and documented, for example:
     - plant and equipment risk assessment – PERA
     - SOPs or instructions are current and available e.g., posted near fixed machines
     - equipment and maintenance records – EMRs
   - Plant is appropriately positioned and installed. For example, equipment designed to be operated in a fixed position is adequately secured to a stable support to prevent inadvertent movement when power is applied or the machine is operated.
   - All the identified appropriate personal protective equipment (PPE) to be worn by staff and students, is recorded in the risk assessment and regularly and repeatedly re-enforced and managed.

4. ***Induction and training:*** a documented, timely induction process for students and staff that includes an understanding of the equipment and demonstration of its safe use is in place and training occurs to provide a defined level of skill relevant to the complexity / risk related to the plant.

   - Staff and students have received an induction on each piece of plant prior to use. Students are engaged in sequential learning and staff are competent in plant use.

5. ***Regularly inspect and clean:*** inspect and maintain equipment according to the manufacturer's instructions/operator manuals for specific advice and frequencies e.g., checking for worn or damaged equipment, parts, leads, blunt tools, flat tyres, build-up of wood dust or waste.

   - Check safety features on machines including guards and switch gear regularly to ensure they are in place and working correctly.
   - Record service and maintenance e.g. on an equipment maintenance register.
   - Principals or HODs confirm the school is included in the Service Maintenance Program which includes a range of workshop and other plant. Ensure any recommendations are reviewed for rectification.
   - Manage damaged equipment: have a written process that outlines how equipment is removed from use until fixed or discarded. Any damaged or faulty equipment is to be labelled clearly so it cannot be used by others until repaired or replaced. This might be a simple label for low-risk equipment or a 'tag-out' and/or 'lock-out' system for higher risk plant such as vehicles or workshop equipment. Ensure processes are communicated to workers.

6. ***Review your equipment and facilities:*** make time annually to review your plant management processes; consider which items may need replacing in the next 12 months; review can include feedback from users about function and suitability, comparison with other schools to identify areas to improve or change; invite an external person to assist in a review, consider past and future maintenance costs.

   - Dispose of equipment appropriately: there are legislative requirements for the safe decommissioning and disposal of equipment. This includes providing information about the equipment to prospective buyers if equipment is to be sold on as 'second hand', making safe (disabling) if sold for scrap or for spare parts. For more information see the Code of Practice section 4.8 and Equipment management for schools procedure.

Modifications are **not** to be made to plant unless it is to rectify identified hazard/s. For example, the addition of improved safety guarding for safer operation. Any modifications must be documented (including risk assessment) and are to be monitored and are to comply with all relevant Australian Standards.

Further information

- Equipment and machinery resources
- Managing the risks of plant in the workplace Code of Practice 2021